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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.     | CONFIRMATION NO. |
|--|-------------|----------------------|-------------------------|------------------|
| 09/755,203   | 01/08/2001  | John N. Sharood      | 11331-003001 / 99555 P1 | 4827             |
| 26171  | 7590        | 01/20/2004           | EXAMINER                |                  |
| FISH & RICHARDSON P.C.<br>1425 K STREET, N.W.<br>11TH FLOOR<br>WASHINGTON, DC 20005-3500 |             |                      | CAO, CHUN               |                  |
|  |             |                      | ART UNIT                | PAPER NUMBER     |
|  |             |                      | 2115                    |                  |
| DATE MAILED: 01/20/2004  |             |                      |                         |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/755,203

Applicant(s)

SHAROOD ET AL.

Examiner

Chun Cao

Art Unit

2115

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 14-27 and 29-36 is/are rejected.
- 7) ☒ Claim(s) 8-13 and 28 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5,6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Claims 1-36 are presented for examination.
2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The current title is imprecise.

***Claim Rejections - 35 U.S.C. § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:  
The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
4. Claim 18 rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Such as “a processor connected to the power line”.
5. Claim 25 rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Such as “the processor comprises a control server”.
6. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
7. Claims 14 and 26-27 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a). The following term lack antecedent basic:

Claim 14, line 2, “the control signal tp”;

Claim 26, line 2, "the service provider".

b). The claim language in the following claims are not clearly understood:

as to claim 27, lines 1-2, it is not clear understand what is mean by "if an appliance service"[i.e. only "if an appliance needs service"].

***Claim Rejections - 35 U.S.C. § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-7, 14-25 and 29-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Carr et al. (Carr), U.S. Patent No. 4,644,320.

As per claim 1, Carr discloses a device [14, figures 1, 2] for monitoring an appliance that receives power from a power source [col. 5, lines 12-15], the device comprising:

a first coupler [34, fig. 2] that couples the device to the power source [col. 5, lines 14-15, 39-42];

a second coupler [32, fig. 2] that couples the device to the appliance [col. 5, lines 15-16, 37-38; col. 6, lines 29-30];

a monitoring circuit [U4, fig. 2] connected between the first coupler and the second coupler to monitor power supplied by the source to the appliance [col. 5, lines 59-64; col. 6, lines 8-10, 28-44]; and

a communications circuit [U7, fig. 2] connected to the monitoring circuit, wherein the monitoring circuit provides data based on the monitored power to the communications circuit [col. 6, lines 55-65; col. 9, lines 44-49].

As per claim 2, Carr discloses that the communications circuit includes a receiver [U7, fig. 2] that receives a signal from the first coupler to control the monitoring circuit [col. 6, lines 55-65].

As per claim 3, Carr discloses that the communications circuit includes a transceiver [U7, fig. 2] that receives a signal from the first coupler to control the monitoring circuit and to transmit monitored power data [col. 6, lines 55-65].

As per claim 4, Carr discloses that the communications circuit comprises a power line carrier transceiver and a power line driver coupled to the monitoring circuitry and the first coupler [U7, fig 2; col. 6, lines 55-65].

As per claim 5, Carr discloses that the monitoring circuit measures current drawn by the appliance [col. 5, lines 59-64; col. 6, lines 28-44].

As per claim 6, Carr discloses that the monitoring circuit includes a processor [U4, fig. 2], that determines an operating state of the appliance based on the measured current [col. 5, lines 59-64; col. 6, lines 28-44].

As per claim 7, Carr discloses that the monitoring circuit includes a memory that stores the measured current and periodically sends measured current data to the first coupler [col. 6, lines 36-44, 55-58; col. 8, lines 12-15].

As per claim 14, Carr discloses that a switch [relay control 19, fig. 2] connected to the first coupler wherein the switch is opened in response to a control signal for preventing power from the source from being supplied to the appliance [col. 5, lines 42-45].

As per claim 15, Carr discloses that a switch [voltage divider 38, fig. 2] connected to the first coupler to adjust the amount of power received by the appliance in response to the control signal [col. 5, line 59-col. 6, line 14].

As per claim 16, Carr discloses that the first coupler comprises a first pin for connection to a live line and a second pin for connection to a neutral line [34, fig. 2].

As per claim 17, Carr discloses that a first power line and a second power line connecting the first and second couplers, wherein the second coupler includes a first slot connected to the first pin through the first power line and a second slot connected to the second pin through the second power line [see connection between 34 and 32 in fig. 2; col. 5, lines 15-17].

10. As per claim 18, Carr discloses a system for monitoring an appliance that receives power from a source [fig. 1, col. 2, lines 27-30], the system comprising:

- a power line [18, fig. 1] connected to the source [col. 5, lines 40-42];

- a circuit [14, fig. 1] connected to the power line and the appliance [col. 5, lines 14-17] to monitor power supplied to the appliance [col. 2, lines 27-44]; and

- a processor [24, fig. 1] connected to the power line [col. 5, lines 21-23],

wherein the circuit sends a signal to the processor through the power line and the signal is based on the power supplied to the appliance [col. 6, lines 55-65; col. 9, lines 44-49].

As per claim 19, Carr discloses that the circuit comprises:

- a first coupler [34, fig. 2] that couples the circuit to the power line [col. 5, lines 14-15, 39-42];

- a second coupler [32, fig. 2] that couples the circuit to the appliance [col. 5, lines 15-16, 37-38; col. 6, lines 29-30];

- a monitoring circuit [U4, fig. 2] connected to the first coupler and the second coupler to monitor power supplied by the source to the appliance [col. 5, lines 59-64; col. 6, lines 8-10, 28-44]; and

- a communications circuit [U7, fig. 2] connected to the monitoring circuit, wherein the monitoring circuit provides data based on the monitored power to the communications circuit for output to the first coupler [col. 6, lines 55-65; col. 9, lines 44-49].

As per claim 20, Carr discloses that the circuit comprises a plug and the first

coupler comprises a first pin for connection to a live line and a second pin for connection to a neutral line [34, fig. 2].

As per claim 21, Carr discloses that the monitoring circuit further comprises a first power line and a second power line connecting the first and second couplers, and the second coupler comprises a first and second slot, with the first slot connected to the first pin through the first power line and the second slot connected to the second pin through the second power line [see connection between 34 and 32 in fig. 2; col. 5, lines 15-17; col. 6, lines 55-60].

As per claim 22, Carr discloses the processor receives signals transmitted on the power line from the circuit and determines a state of operation of the appliance based on the signals [col. 8, lines 2-20].

As per claim 23, Carr discloses that the circuit includes a receiver [U7, fig. 2] for receiving signals sent from the processor on the power line [col. 6, lines 55-65; col. 8, lines 6-15].

As per claim 24, Carr discloses that the appliance's operating state is controlled based on the signals sent to the circuit from the processor [col. 8, lines 6-15].

As per claim 25, Carr discloses that a connection to a service provider [12, fig. 1], wherein the circuit that sends signals to the service provider about the operation of the appliance [col. 6, lines 55-65; col. 8, lines 6-15].

11. As to claims 29-33 and 35 are written in means plus function format and contain the same limitation as to claims 1-3, 5, 6, 14 respectively, therefore the same rejections applied.

As per claim 34, Carr teaches that monitoring means determines power used by the appliance [col. 6, lines 28-39].

12. As per claim 36, Carr discloses that a retrofit plug adapted to be received by an appliance that receives power from a source [figures 1, 2], the retrofit plug [14, fig. 2] comprising:

a live pin; a neutral pin; a first line connected to the live pin; a second line connected to the neutral pin [fig. 2];

a first slot, connected to the first line, for receiving a pin from the appliance; a second slot, connected to the second line, for receiving a neutral pin from the appliance [see wire connection between 32 and 34 in fig. 2; col. 5, lines 14-17];

a transformer [R3, fig. 2, col. 7, lines 26-27] connected to monitor the first and second lines [fig. 2];

a measurement circuit [U4, fig. 2] connected to the transformer for measuring current supplied to the appliance [col. 5, lines 59-64; col. 6, lines 28-44]; and

a power line carrier transceiver for encoding a power line carrier signal based on the measured current [col. 6, lines 55-65; col. 9, lines 44-49].

***Allowable Subject Matter***

13. Claims 8-13 and 26-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Hand-delivered responses should be brought to Crystal Park II, 2121

Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun Cao at (703) 308-6106. The examiner can normally be reached on Monday-Friday from 7:30 am - 4:00 pm. If attempts to reach the examiner by phone



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are unsuccessful, the examiner's supervisor Thomas Lee can be reached at (703) 305-9717. The fax number for this Art Unit is following: Official (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 306-5631.



Chun Cao  
Jan. 8, 2004